

U.S. Patent Application Serial No. 09/807,183
Amendment dated January 5, 2004
Reply to OA of September 10, 2003

REMARKS

Claim 1 has been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicant regards as his invention. The applicant respectfully submits that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated September 10, 2003.

Double Patenting

In item 1 on page 2 of the Office Action the Examiner is rejecting claim 1 and 9 under 35 USC §101 as the same invention as claim 1 of U.S. Patent No. 6,334,620.

A review of U.S. Patent No. 6,334,620 to Reetz et al. indicates that this patent is a bellows seal for a pivot joint used in automobiles. Claim 1 is therefore not related at all to the multi-directional input apparatus as claimed in claims 1 and 9 of the present application. Therefore, it must be assumed that the U.S. Patent No. 6,334,620 is incorrect and another patent is being referred to by the Examiner. Thus, the Examiner's grounds of rejection is respectfully traversed and it is requested that the correct patent number be supplied.

Objection to the Specification:

The abstract is objected to because it is not one paragraph of 150 words or less.

U.S. Patent Application Serial No. 09/807,183
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Applicant has deleted the current Abstract, and is submitting herewith a substitute Abstract of the Disclosure in place therefor.

The Applicant respectfully requests that the substitute Abstract of the Disclosure submitted herewith be approved by the Examiner.

Claim Rejection under 35 USC §102

Claims 1-4 and 15 and re rejected under 35 USC §102(e) as being anticipated by Takeda et al. (U.S. Patent No. 6,002,351).

The present invention is a joy stick having an operating member (30). The operating member is composed of a shaft (31) having a disk (32) and turning shafts (35 and 35). The turning members (40A and 40B) are fitted over the operating member (30) and come into contact with turning shafts (35 and 35). The turning member (40B) has at its lower surface a recess (46B) which accommodates the disc (32). The turning members (40A and 40B) are provided at opposite end shafts with flat surfaces (44A and 44B). An annular slider (50) is brought into contact from below with flat surfaces (44A and 44B) by a spring (60). Using the present invention the operating member (30) may be reliably returned to a neutral position.

Takeda et al. describes a joy stick having a lever (64) that has a projection (66) formed radially outwardly projecting at one end portion thereof. The lever 64 is provided with a

diameter not greater than the shorter diameter of the elongate holes (44 and 54) of the rocking members (40 and 42). The lever (64) has a spherical portion (68) formed at an intermediate portion that fits into a circular hole (88) of cover (18).

Takeda et al. does not describe or suggest a slider (50) that abuts from below against a disc (32) downwardly formed on a lower portion of the operating member (30). Further, the claimed input apparatus features the precise returning of an operating member (30) to a neutral position. It is achieved by the structure that a slider (50) biased by a spring (60) from below abuts from below against a disc (32) disposed below the operating member (30).

Specifically, claim 1 patentably distinguishes over the prior art relied upon by reciting,

“A multi-directional input apparatus comprising a set of upper and lower turning members supported in said case such that said tuning members can turn into two intersecting directions and each having a long hole extending in a direction perpendicular to said turning direction; an operating member passing through each of said long holes of said set of upper and lower turning members, said operating member turning each of said turning members when said operating member is operated in arbitrary direction therearound; a returning mechanism for returning said operating member from a position when said operating member is operated in the arbitrary direction therearound to a neutral position; and set of signal output means connected to ends of said set of upper and lower turning members for outputting signal corresponding to a turning angle of each of said turning members; wherein said operating member is integrally provided at its lower portion with a turning shaft which is perpendicular to said operating member at right angles and/or a turning-type coming-out preventing portion comprising an upwardly swelling semi-spherical portion, and a recess into which said coming-out preventing portion is turnably fitted is provided in a lower surface of the lower turning members, wherein said returning mechanism comprises a spring compressed and accommodated in said cases, and a slider biased by said spring, wherein said slider resiliently abuts from below against a flat surface downwardly formed on a lower portion of said operating member and flat surfaces downwardly formed on opposite end shafts of said set of upper and

U.S. Patent Application Serial No. **09/807,183**
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lower turning members." (Emphasis Added)

Therefore, withdrawal of the rejection of Claims 1-4 and 15 under 35 USC §102(e) as being anticipated by Takeda et al. (U.S. Patent No. 6,002,351) is respectfully requested.

Claim Rejections under 35 USC §103

Claims 5-14 are rejected under 35 USC §103(a) as being unpatentable over Takada et al. (U.S. Patent No. 6,002,351) as applied to the claims above, and further in view of Cheng et al. (U.S. Patent No. 6,353,430) and Shimomura (U.S. Patent No. 6,078,247).

Cheng et al. describes a gimbal mounted joy stick with a z-axis switch.

Shimomura describes a joy stick with a rectangular cross section.

Claims 5-14 are allowable by virtue of the dependence upon an allowable independent claim. Therefore, withdrawal of the rejection of Claims 5-14 under 35 USC §103(a) as being unpatentable over Takada et al. (U.S. Patent No. 6,002,351) and further in view of Cheng et al. (U.S. Patent No. 6,353,430) and Shimomura (U.S. Patent No. 6,078,247) is respectfully requested.

Conclusion

In view of the aforementioned amendments and accompanying remarks, claim 1, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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